

Appn. No.: 09/640,103
Amendment Dated July 8, 2005
Reply to Office Action of April 8, 2005

FKC-100US

Remarks/Arguments:

Claims 1-16 are pending in the above-identified application. Claims 1-16 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Buskirk, Jr. et al. (hereinafter Buskirk) and Eichstaedt et al. (hereinafter Eichstaedt). This ground for rejection is respectfully traversed. In particular, neither Buskirk, Eichstaedt nor their combination discloses or suggests,

at least one text analyzer and associated rule engine being co-operable to apply at least one rule to the content of a received electronic message and to generate at least one result based on the application of said at least one rule ... wherein the rules are arranged into a plurality of rule sets, the classification module being arranged to cause the at least one text analyzer in association with the associated rule engine to apply at least one rule set of the plurality of rule sets to the message content in accordance with a hierarchical structure....

as set forth in claim 1. Claims 8, 9, 14, 15 and 16 include similar recitations.

Overview

The electronic message processing system of claim 1 relates, in particular, to the application of rules to electronic messages in order that the messages can be classified into one or more categories. Claim 1 concerns the application of rules by a classification module and recites that the rules are arranged into rule sets, and that the rule sets are applied to the message content in accordance with a hierarchical structure such that the result of applying one rules set to the message content determines which further rule set is next applied.

US 6,424,997 (Buskirk) does not disclose rules, used for classification, that are arranged into rule sets. Nor does Buskirk disclose the application of rules, or rule sets, in a hierarchical manner.

US 6,385,619 (Eichstaedt) does not relate to electronic message processing. In particular, Eichstaedt does not relate to the application of rules to electronic messages in order that the messages can be classified into one or more categories. Therefore, Eichstaedt does not disclose the application of rules, or rule sets, in a hierarchical manner as required by claim 1. Eichstaedt does disclose that electronic documents can be classified into categories wherein the

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categories are arranged in a hierarchical taxonomy, but this is not the same as, or even similar to, applying rules to message content in a hierarchical manner.

The advantages of the system of claim 1 include: a) individual rule sets can be maintained/updated independently of the other rule sets; and b) not all rules need be applied to all messages. The first of these advantages, allows, for example, a number of different branches/departments of a large distributed organization to maintain their own rule set(s) without affecting the rule sets of others, and irrespective of the internal technology with which each rule set is used.

Response to Examiner's "Response to Arguments"

At page 7, point 1 of the Office Action, the Examiner, referring to Buskirk, asserts that "The classification rules include analyzing by tokenization of the text, morphological analysis of the text, etc. (in this case interpreted as rule sets)." Applicant respectfully disagrees with this assertion.

The Applicant respectfully points out that the operations identified by Buskirk at column 3 lines 61 to 64 (which include tokenization and morphological analysis) are not acts of classification. Rather, they are pre-processing operations that facilitate classification. For example, tokenization involves breaking a string of text into smaller units, e.g. words, while morphological analysis involves the normalization of inflected word forms.

This is clear from Figure 2 of Buskirk where it can be seen that the pre-processing operations (tokenization, morphology etc.) are performed at the document processor module 110. The output of the document processor module 110 is a feature vector 115 and it is the feature vector 115 that is subjected to classification by the application of the classification rules 125 by the rule applier 120.

Therefore, it is respectfully submitted that the pre-processing operations (tokenization, morphology etc.) performed at the document processor 110 cannot be regarded as involving the application of classification rules. In this connection, it is noted that, in accordance with claim 1, the application of rules to the message content produces "at least one result" which is

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used "to classify the electronic message into at least one message category". The pre-processing operations identified by Buskirk do not produce "at least one result" based on which electronic messages are classified and so do not involve the application of rules within the meaning of claim 1.

Again referring to Buskirk, at page 7, point 2, the Examiner states "In order to perform an appropriate action to the message, a rule or a set of rule must be applied". This refers to the operations performed at the action selector 130 in Figure 1 of Buskirk. The Applicant respectfully points out that any rules that may be applied by the action selector 130 do not relate to classification. Rather, they relate to routing. This is clear from Figure 2 of Buskirk where it can be seen that the action selector 130 appears after the "classes with confidence values 128" are created, i.e. after classification is complete. Accordingly, any rules applied by Buskirk's action selector 130 do not produce "at least one result" which is used "to classify the electronic message into at least one message category", as is required by claim 1. Further, any rules applied by Buskirk's action selector 130 are not applied to the message content (as is required by claim 1). Rather, they are applied to the classification results in order to determine how to route a message. It is respectfully submitted, therefore, that the operation of the action selector 130 does not involve the application of rule sets to message content in the manner required by claim 1.

At page 7, point 2, the Examiner states that "Eichstaedt also discloses classifying each document into a hierarchical structure". The Applicant wishes to emphasize that this is completely different from applying rule sets in a hierarchical manner as required by claim 1. Eichstaedt discloses hierarchically structuring a document into parts (e.g. title, abstract etc.) and classifying the document into categories, wherein the categories are arranged as a hierarchical taxonomy (e.g. like the US Patent Class Definitions) – see Eichstaedt col. 1, lines 38-42, column 2 lines 22-55. This does not relate in any way to the application of rule sets to message content in accordance with a hierarchical structure as required by claim 1. One way to illustrate this is to consider that, in accordance with Eichstaedt's teaching, documents can only be assigned to the hierarchical categories after classification has taken place. This is in contrast with the system of claim 1 wherein the hierarchical application of rule sets takes place as part of the classification process. The Applicant also wishes to emphasize that Eichstaedt does not relate to message processing or to the application of rules to messages for classification purposes.

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At page 7, point 3, the Examiner states that "... 'routing' is interpreted as an action from the 'rule set' and the arrival of the message in the 'right skill, queue, person, or department' is interpreted as 'the next rule set to be applied'". The Applicant respectfully disagrees with the Examiner. Claim 1 stipulates that the application of rules to the message content produces "at least one result" which is used "to classify the electronic message into at least one message category". This precludes "routing" from being an action or result of applying a rule within the meaning of claim 1 since routing does not produce "at least one result" which is used "to classify the electronic message into at least one message category." Moreover, routing can only take place after classification. Similarly, this precludes the arrival of the message in the "right skill, queue, person, or department" from being interpreted as "the next rule set to be applied" since the processing performed after said arrival of the message does not involve the production of "at least one result" which is used "to classify the electronic message into at least one message category," not least because it takes place after classification is completed.

Accordingly, neither Buskirk or Eichstaedt disclose either of the following features of

Claim 1:

1. The classification rules are arranged into a plurality of rule sets (classification rules being such that the application of the rules to message content produces "at least one result" which is used "to classify the electronic message into at least one message category").
2. The classification module being arranged to cause the text analyzer in association with the rule engine to apply at least one rule set to the message content in accordance with a hierarchical structure.
3. Whereby the at least one result generated by application of a rule set to the message content determines the at least one next rule set to be applied.

With regard to obviousness, since Buskirk and Eichstaedt do not disclose any of features 1 to 3 either individually or collectively, it is respectfully submitted that the combined teaching of Buskirk and Eichstaedt cannot lead the skilled person to the system of claim 1.

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Furthermore, as Eichstaedt does not even relate to message processing, the only suggestion to combine Eichstaedt with Buskirk comes from Applicant's own disclosure. It is well settled that Applicant's disclosure can not be used against him in this manner.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.* (emphasis added)¹

Accordingly, the combination of Buskirk with Eichstaedt is improper.

Moreover, if one of ordinary skill in the art without knowledge of Applicant's invention were to apply the teaching of Eichstaedt to Buskirk, the result would be Buskirk's electronic messages being stored in accordance with Eichstaedt's hierarchical structure after classification has taken place (i.e. after the "classes with confidence values 128" stage of the Buskirk system) since the Eichstaedt hierarchical structure can be applied only after a document has been categorized. This is in contrast to the system of claim 1 in which rules are applied in a hierachal manner as part of the classification process. Accordingly, combining the teaching of Buskirk and Eichstaedt would not lead the skilled person to the system of claim 1.

As claims 8, 9, 14, 15 and 16 include similar recitations, similar comments apply to those claims. Claims 2-7, 11, 12 and 13 depend from claim 1 and claim 10 depends from claim 9. Accordingly, these claims are not subject to rejection under 35 U.S.C. § 103(a) in view of Buskirk and Eichstaedt for at least the same reasons as claims 1 and 9.

¹ MPEP §706.02(j)

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In view of the foregoing remarks, Applicant requests that the Examiner reconsider and withdraw the rejection of claims 1-16.

Respectfully submitted,



Kenneth N. Nigon, Reg. No. 31,549
Attorney for Applicant

KNN/tmb

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P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

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July 8, 2005
Denise Morgan
Denise Morgan

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